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S/N: 10/605,844

# **REMARKS**

Claims 1, 3-6, 9-11, 16, 18, 20, 22, and 23 are pending in the present application. In the Office Action mailed August 2, 2005, the Examiner rejected claims 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Pelc et al., (US Pub. 2003/0123612) in view of Mistretta et al., (USP 5,873,825), Wen (USP 6,798,118), and Krause et al. (USP 4,377,002). Claims 3 and 5 were objected to because of informalities. Applicant appreciates the allowability of claims 1, 3-6, 9, 16, 18, 20, 22, and 23.

Applicant has amended claims 3, 5, and 10 to correct typographical errors and address the informalities raised by the Examiner.

Claims 10-11 stand rejected under 35 U.S.C. §103(a) based on four references: Pelc et al., Mistretta et al., Wen, and Krause et al. The Examiner has concluded that not only is there a motivation in the references themselves for such a four-way combination, but that collectively the four references teach, or at least suggest, each and every element called for in claims 10-11. Applicant disagrees.

The burden of establishing a prima facie case of obviousness falls on the Examiner. MPEP §2142. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a prima facie case, the Examiner must not only show that the combination includes each and every element of the claimed invention, but also provide "a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). That is, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP §2143.01. "The fact that references can be combined or modified is not sufficient to establish prima facie obviousness." *Id.* When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). Applicant believes that a prima facie case of obviousness has not been established and one cannot be made based on the art of

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record because there is no motivation to combine the references and the art of record fails to teach each and every element of the claimed invention.

Pelc et al. teaches an x-ray tube for operating in a magnetic field. The reference teaches that "the x-ray tube is preferably a stationary anode x-ray tube." ¶35. Pelc et al. acknowledges, however, that "use of rotating anode tubes may be feasible, however, especially if non-magnetic means are used to drive the anode rotation." *Id.* As examples of such non-magnetic means, Pelc et al. suggests that the "magnetic components within a standard x-ray tube [be] replaced with equivalent non-magnetic components, e.g., stainless steel components." *Id.* Therefore, Pelc et al. is quite clear that to avoid distortion of the MR magnetic field during the simultaneous acquisition of MR and radiographic data, stainless steel or other non-magnetic x-ray tube components must be used. Thus, as acknowledged by the Examiner, Pelc et al. fails to teach or suggest rotation of the rotating anode of an x-ray tube to a pre-data acquisition rotational speed and then allowing the anode to rotate as a result of momentum during data acquisition.

Accordingly, the Examiner combined Pelc et al. with Krause et al. Krause et al. is directed to an x-ray diagnostic generator having an inverter circuit feeding a high voltage transformer. The reference does teach that "if the x-ray tube is to be switched on, the switch 20 is opened and a radiograph proceeds in the case of a running-down (coasting) rotary anode." Col. 2, ll. 27-29. However, there is no teaching or suggestion in Krause et al. that the inventors thereof contemplated or one skilled in the art would contemplate incorporating of such an x-ray tube or method of controlling such an x-ray tube in an MR system.

In hindsight, it would appear that one skilled in the art would be motivated to form such a combination. However, the application of such hindsight is impermissible. While Applicant agrees that, inevitably, an obviousness rejection requires some degree of hindsight, the application of such hindsight is only permissible if the references themselves provide the motivation for the combination. That is, the claim elements themselves cannot form the basis of motivation. In other words, the Examiner cannot use the claim elements as an instruction manual, find the necessary references, and then assume a motivation to combine because the claim calls for such a combination of claim elements. In short, the references must provide the motivational support.

Applying the above standard to the references at hand, it is clear that the Examiner has garnered the requisite motivation to combine the reference from the claims themselves rather than a suggestion in the references. Pelc et al. teaches that simultaneous acquisition of MR and radiographic data, while not preferred, is possible if non-magnetic components are used in the x-

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ray tube assembly. From that disclosure, it is clear that Pelc et al. did not contemplate the driving of an x-ray tube assembly to a pre-data acquisition rotational speed and then allowing the anode to coast during data acquisition. The only contemplated and disclosed means of achieving simultaneous MR and x-ray data acquisition is via an x-ray tube absent magnetic components. Moreover, Pelc et al. does not indicate any drawbacks associated with using non-magnetic components that would encourage one skilled in the art to use magnetic components, but employ a coasting technique such as that claimed.

Krause et al., while disclosing a coasting-down technique, neither teaches nor suggests implementation of such an assembly with/in an MR system, or that such an assembly overcomes drawbacks associated with using an x-ray assembly having non-magnetic components. Krause et al. is completely silent on both issues and, as such, any suggestion that the coasting-down technique may be applicable for the simultaneous acquisition of MR and radiographic data comes directly from Applicant's disclosure, which as addressed above, is an application of impermissible hindsight.

The Examiner also combined the teachings of Mistretta et al. with Pelc et al. and Krause et al. Mistretta et al. is relied upon for its teaching of components of an MR system. The reference neither teaches nor suggests the use of x-ray tube assembly for the acquisition of radiographic data with an MR system nor does the reference teach or suggest the claimed momentum-based rotation of an x-ray tube anode as called for in the claims.

The Examiner also relied upon Wen and gave USP 6,798,188 as the associated patent number. However, that patent number corresponds to Dathe et al. which is directed to a voltage peak measurement with digital memory system. Accordingly, it is believed that the Examiner has misidentified the reference to which the Examiner is relying. Moreover, Dathe et al. fails to teach or suggest any of the elements of the claimed invention. In light of the misidentification of the reference, Applicant requests the Examiner re-issue this Office Action with the proper reference identifier should the Examiner not allow claims 10-11.

In sum, the Examiner has not established a *prima facie* case for obviousness. The Examiner has not shown that one skilled in the art would have been motivated to combine the four references relied upon the rejection based on a motivation in the references themselves. The Examiner has found the requisite motivation in the claims rather than the references. That is the application of impermissible hindsight and cannot be used as a basis of sustaining an obviousness rejection. Therefore, it is believed that claims 10-11 call for subject matter patentably distinct from that taught and/or suggested by the art of record. Allowance thereof is requested.

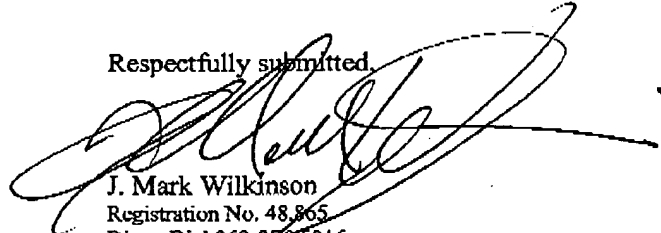
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Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 3-6, 9-11, 16, 18, 20, 22, and 23.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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